500 HOME NETWORK HNW HOME
NETWORK SYSTEM
100 DHCP SERVER GENERAL TERMINAL HOME AGENT (HA) SYS MOBILE IP NETWORK SYSTEM IP NETWORK FOREIGN AGENT (FA) MOBILE NODE (MN) 600 FOREIGN NETWORK FNW FOREIGN NETWORK SYSTEM

FIG. 1

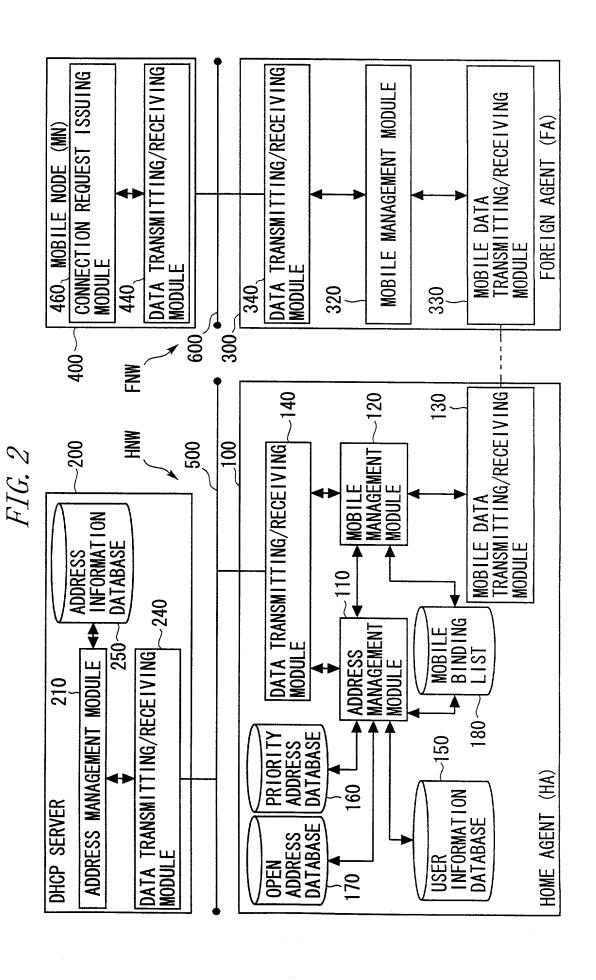
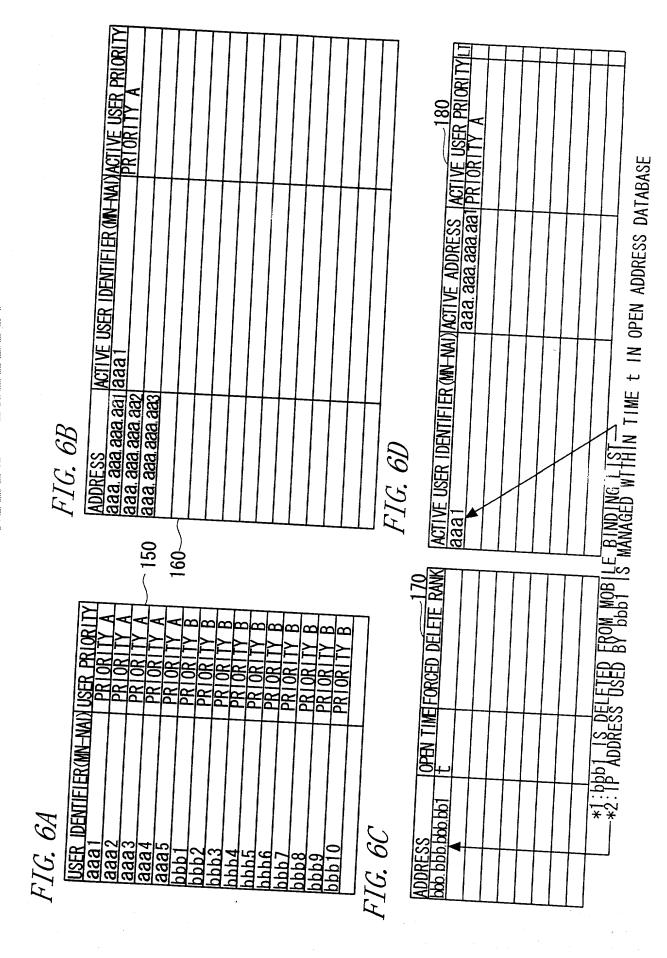


FIG. 3A		•	FIG. 3B	
USER IDENTIFIER(MN-NAI) USER           aaa 1         PR           aaa 2         PR           aaa 3         PR           aaa 4         PR           bbb 1         PR           bbb 2         PR           bbb 3         PR           bbb 4         PR           bbb 5         PR           bbb 6         PR           bbb 7         PR           bbb 9         PR           bbb 9         PR           bbb 10         PR           bbb 10         PR           bbb 10         PR           bbb 10         PR	WEER PROPERTY A PROPERTY BENEVATIVE BENEVATI	160	ADDRESS ACTIVE USER IDENTIFIE aaa. aaa. aaa. aaa aaa. aaa. aaa	ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE USER PRIORITY
FIG. 3C ADDRESS OPEN	TIME FORCED DELE	E RANK	ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORI	RESS ACTIVE USER PRIORITYLT
*1:ASSUMING THAT 15 U *2:EIVE PRIORITY—A US FOR 3 PRIORITY—A US	JSERS (PRIORITY-A SERS ARE REGIS SERS BEFOREHAND	USERS: aaa TERED, ANI	A USERS: aaa1-aaa5 PRIORITY-B USERS: bbb1-bbb10) ARE REGISTERED IN HA-STERED, AND IT IS THEREFORE ASSUMED THAT HA ACQUIRES IP ADDRESSES	A ACQUIRES IP ADDRESSES

USER PRIORI	
SER	SER PRIOR
	ACTIVE ADDRESS aaa.aaa.aaal
	1. aa 1. aa 1. aa 1. aa 1. aa
	ADDI
	L L
ACTIVE USER IDENTIFIER (MN-NAI) ACTI	SES SES
22   <u>aaa a</u>	PENT SENT
33 39 39 39 47 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4/L
FIG. 4B  ADDRESS ACTIV aaa. aaa. aaa. aa2 aaa. aaa. aaa. aa3 aaa. aaa. aaa. aa3	FIG. 4D aat aat AND THERE
	FIG. 4D  ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORITY A  Baaa aaa aaa aaa aaa aaa priority A  PRIORITY-A AND THEREFORE USES IP ADDRESS REGISTERED IN PRIORITY  a1 IS ACTIVE IS ADMINISTERED
09	ACT I
160-	E RANK E RANK SRIORI
<u> </u>	
	Y B DELETT
SOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSO	RCED RCED SERVED
A SOLO SOLO SOLO SOLO SOLO SOLO SOLO SOL	PRIORI EFORCE AAABAG AAABAG
	S S S S S S S S S S S S S S S S S S S
	OPEN TIME FORCED  SER aga 1   S G   VEEN TIME FORCED
USER IDENTIFIER(MN-NAI) U aaa 1 aaa 2 aaa 3 aaa 4 aaa 5 bbb 1 bbb 2 bbb 4 bbb 5 bbb 6 bbb 6 bbb 6 bbb 7 bbb 6 bbb 8 bbb 7 bbb 8 bbb	\$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$
USER IDE agaa 1 agaa 2 agaa 3 agaa 4 agaa 3 agaa 4 agaa 5 bbb 1 bbb 2 bbb 4 bbb 5 bbb 6 bbb 6 bbb 6 bbb 7 bbb 6 bb	FIG. 4C
1	

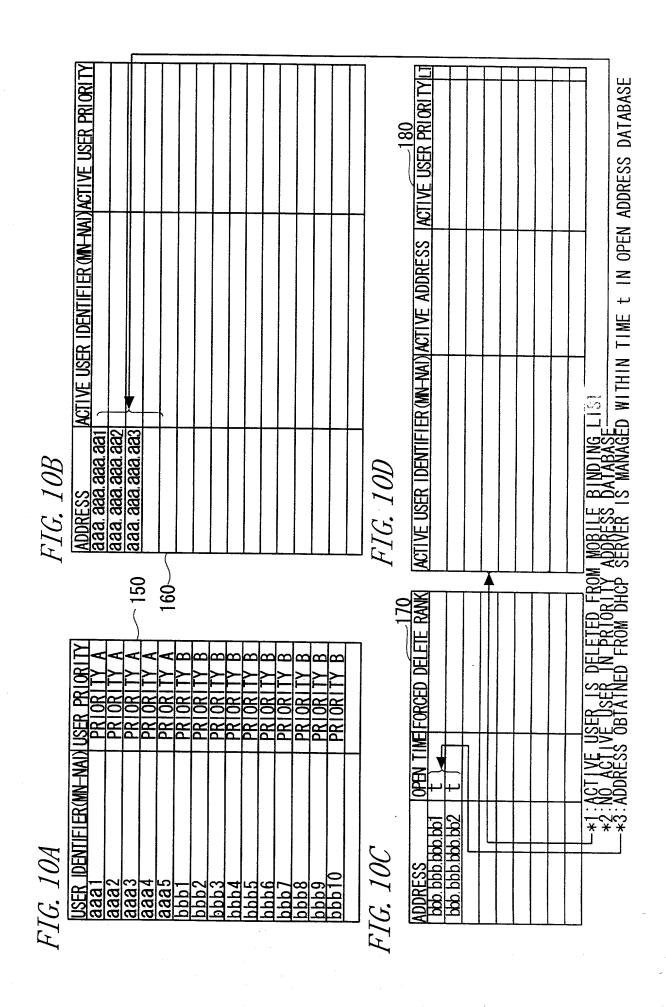
ACTIVE USER PRIORITY  ACTIVE USER PRIORITY  180  ACTIVE USER PRIORITY  PRIORITY A  PRIORITY B  XI	NESS )
	EFORE OBTAINS IP ADI
ADDRESS ACTIVE USER IDENTIFIER (MN-NA aaa. aaa. aaa. aaa aaa. aaa. aaa. aaa aaa. aaa. aaa aaa. aa. aaa. aa. aa	1 IS GIVEN PRIORITY B AND THEREFORE OBTAINS IP ADDRESS PAIN USERS agai AND bbb1 ARE ACTIVE IS ADMINISTERED
USER PRIORITY A  PRIORITY A  PRIORITY A  PRIORITY B  P	*1:USER bbb1 IS GIVEN (bbb, bbb, bb1) FR -*2:STATUS THAT USERS
FIG. 54  USER IDENTIFIER(MN-NAI) aaaa1 aaaa2 aaaa4 aaaa5 bbb1 bbb1 bbb2 bbb3 bbb8 bbb8 bbb8 bbb8 bbb8 bbb8	



ADDRESS ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE USER PRIORITY aaa. aaa. aaa. aaa. aaa. aaa. aaa. aa	TO ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORITY A  bbb2  bbb2  bbb2  bbb2  AND bbb2 ARE ACTIVE IS ADMINSTERED  USED BY bbb1 IS OBTAINED NOT
USER IDENTIFIER(MN-NAI) USER PRIORITY A aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	ADDRESS OPEN TIME FORCED DELETE RANK ACTIVE BAB ADDRESS USED BUT FROM DHCP SERVER BUT FROM

ADDRESS ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE USER PRIORITY A aaa. aaa. aaa. aaa. aaa. aaa. aaa. a	ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORITY LITERATE AND ACTIVE ADDRESS ACTIVE USER PRIORITY A A A A A A A A A A A A A A A A A A A
FIG. 84   FIG.	ADDRESS OPEN TIME FORCED DELETE RANK ACTIVE USE  ADDRESS OPEN TIME FORCED DELETE RANK ACTIVE USE  ACTIVE USE  ACTIVE USE

ADDRESS ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE USER PRIORITY A aaa aaa aaa aaa aaa aaa aaa aa aa aaa aa a	FIG. 9D  ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORITY A  aaa aaa aaa aaa aaa aaa aaa aaa aaa
MTIFIER(MN-NAI) USER PRIORITY A PRIORITY A PRIORITY A PRIORITY B	ADDRESS OPEN TIME FORCED DELETE RANK  *1:USER USING PRIORITY ADDRE  *2:ADDRESSES bbb bbb bbb bbb bbb bbb bbb bbb bb



ADDRESS ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE USER PRIORI aaa. aaa. aaa. aaa. aaa. aaa. aaa. aa	ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORITY agaa aga agai PR 10R 1 TY A bbb 1
	ADDRESS OPEN TIME FORCED DELETE RANK  ADDRESS OPEN TIME FORCED DELETE RANK  **1: IT IS INDICATED TH  **2: IT IS INDICATED TH  **3: IT IS INDICATED TH  **4: IT IS INDICATED

# FIG. 12A

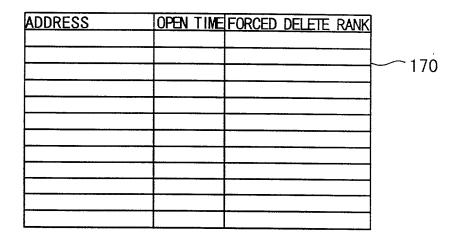
USER IDENTIFIER(MN-NAI	USER PRIORITY	
<u>aaa1</u>	PRIORITY A	
aaa2	PRIORITY A	
aaa3	PRIORITY A	
<u>aaa4</u>	PRIORITY A	
aaa5	PRIORITY A	
bbb1	PRIORITY B	150
bbb2	PRIORITY B	
bbb3	PRIORITY B	
bbb4	PRIORITY B	
hbb5	PRIORITY B	]
bbb6	PRIORITY B	}
bbb7	PRIORITY B	
bbb8	PRIORITY B	
bbb9	PRIORITY B	1
bbb10	PRIORITY B	
		]

# FIG. 12B

160

ADDRESS ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE USER PRIORITY
aaa.aaa.aaa.aa1 aaa1 PRIORITY A
aaa.aaa.aa2 PRIORITY A
aaa.aaa.aa3 PRIORITY A

#### FIG. 12C



# FIG. 12D

180

ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORITY LT aaa1 aaa.aaa.aa1|PRIORITY A aaa aaa aaa aa2 PRIORITY A aaa2 aaa.aaa.aaa.pRIORITY aaa3 bbb1 bbb. bbb. bbb. bb1|PRIORITY B bbb2 bbb. bbb. bbb. bb2 PRIORITY bbb. bbb. bb3 PRIORITY bbb3 bbb4 bbb. bbb. bbb. bb4 PRIORITY bbb5 bbb. bbb. bbb. bb5 PRIORITY bbb6 bbb. bbb. bbb. bb6 PRIORITY bbb7 bbb. bbb. bbb. bb7 PRIORITY CCC1 CCC, CCC, CCC, CC1 PRIORITY C CCC2 CCC. CCC. CCC. CC2 PRIORITY
CCC. CCC. CCC. CCC. PRIORITY C CCC3 CCC4 CCC. CCC. CCC, CC4 PRIORITY

# FIG. 13A

USER IDENTIFIER(MN-NAI)	USER PRIORITY	
aaa1	PRIORITY A	
aaa2	PRIORITY A	
aaa3	PRIORITY A	1
aaa4	PRIORITY A	
aaa5	PRIORITY A	
bbb1	PRIORITY B	150
bbb2	PRIORITY B	
bbb3	PRIORITY B	
hhh4	PRIORITY B	
bbb5	PRIORITY B	
hbb6	PRIORITY B	
bbb7	PRIORITY B	
bbb8	PRIORITY B	
bbb9	PRIORITY B	
bbb10	PRIORITY B	

# FIG. 13B

160

# FIG. 13C

	·		
ADDRESS	OPEN TIME	FORCED DELETE RANK	
CCC, CCC, CCC, CC2		PRIORITY A)	170
CCC, CCC, CCC, CC3	Z	PRIORITY A	.,,
CCC, CCC, CCC, CC4		PRIORITY A	
		3	
*1:1P ADD	RESS USE	D BY PRIORITY-C N ADDRESS DATABAS USERS OTHER THAN	USER IS
SIRUEL	LINIOPE	N ADDRESS DATABAS	;E
→ *Z · ALLUUA		USERS OTHER THAN ERS IS INHIBITED	<b>V</b>
TIME 7	11-W 026	EKO 19 INHIBITED	WILLIN
1 1 ML 2	•		

FIG. 13D

180

aaa1	aaa.aaa.aa1 PRIORITY A	
aaa2	aaa.aaa.aaa.priority A	[
aaa3	aaa.aaa.aaa,aaa	
bbb1	bbb. bbb. bbb. bb1 PRIORITY B	
bbb2	bbb. bbb. bbb. bb2 PRIORITY B	
<u>bbb3</u>	bbb. bbb. bbb. bb3 PRIORITY B	
bbb4	bbb. bbb. bbb. bb4 PRIORITY B	
bbb5	bbb, bbb, bbb, bb5 PRIORITY B	
bbb6	bbb. bbb. bbb. bb6 PRIORITY B	$\neg$
bbb7	bbb. bbb. bbb. bb7 PRIORITY B	
<u>aaa4</u>	CCC, CCC, CCC, CC1 PRIORITY A	$\neg$

### FIG. 14A

USER IDENTIFIER(MN-NAI)	USER PRIORITY	
aaaı	PRIORITY A	
aaa2	PRIORITY A	
aaa3	PRIORITY A	
<u>aaa4</u>	PRIORITY A	
aaa5	PRIORITY A	
bbb1	PRIORITY B	
bbb2	PRIORITY B	
bbb3	PRIORITY B	
bbb4	PRIORITY B	<b>△150</b>
bbb5	PRIORITY B	150
bbb6	PRIORITY B	
bbb7	PRIORITY B	
bbb8	PRIORITY B	
bbb9	PRIORITY B	
bbb10	PRIORITY B	

# FIG. 14B

ADDRESS ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE USER PRIORITY
aaa.aaa.aaa.aa1 aaa1 PRIORITY A
aaa.aaa.aaa.aa2 PRIORITY A
aaa.aaa.aaa.aa3 aaa3 PRIORITY A

#### FIG. 14C

ADDRESS	OPEN	TIME	FORCED I	DELETE	RANK	
CCC. CCC.CCC.CC2	t					
CCC, CCC, CCC, CC3	t					
CCC, CCC, CCC, CC4	t					170
						170

L\*1:PREFERENTIAL ALLOCATION MODE TO PRIORITY—A
USER IS SWITCHED OVER TO GENERAL ALLOCATION
MODE BY CLEARING FORCED DELETE RANK AFTER
ELAPSE OF PROTECTION TIME z OF FORCIBLY
DELETED IP ADDRESS AND REWRITING STORAGE
CONTENT WITHIN OPEN TIME t, AND OBTAINED IP
ADDRESS IS RETURNED TO DHCP SERVER AFTER
ELAPSE OF OPEN TIME t. IF REGISTRATION REQUESTS
ARE GIVEN FROM PRIORITY—A, —B AND —C USERS,
IP ADDRESSES STORED IN OPEN ADDRESS DATABASE
ARE ALLOCATED

#### FIG. 14D

180 ACTIVE USER IDENTIFIER (MN-NAI) ACTIVE ADDRESS ACTIVE USER PRIORITY LT aaa 1 aaa.aaa.aa1|PRIORITY A aaa2 aaa.aaa.aa2PRIORITY A aaa.aaa.aaa PRIORITY aaa3 bbb1 bbb. bbb. bb1|PRIORITY bbb2 bbb. bbb. bbb. bb2 PRIORITY bbb3 bbb, bbb, bbb, bb3 PRIORITY bbb4 bbb, bbb, bbb, bb4 PRIORITY bbb5 bbb. bbb. bbb. bb5 PRIORITY bbb6 bbb. bbb. bbb. bb6 PRIORITY bbb7 bbb, bbb, bbb, bb7 PRIORITY aaa4 CCC. CCC. CCC, CC1 PRIORITY

# FIG. 15

250 ADDRESS INFORMATION DATABASE

The state of the s		
LEASE IP ADDRESS CLIENT IDENTIFIER	TIFIER LEASE TIME	
nnn. nnn. nnn. nn1 abc1		
nnn. nnn. nn2 abc2	ш	◆ON-LEASE OF nnn. nnn. nnn. nn2 T0 CLIENT abc2
nnn. nnn. nnn. nn3 abc3	u	
nnn. nnn. nn4		◆-UNUSED (FREE)
•		
•		
•		
nnn. nnn. mmm		←UNUSED (FREE)

FIG. 16

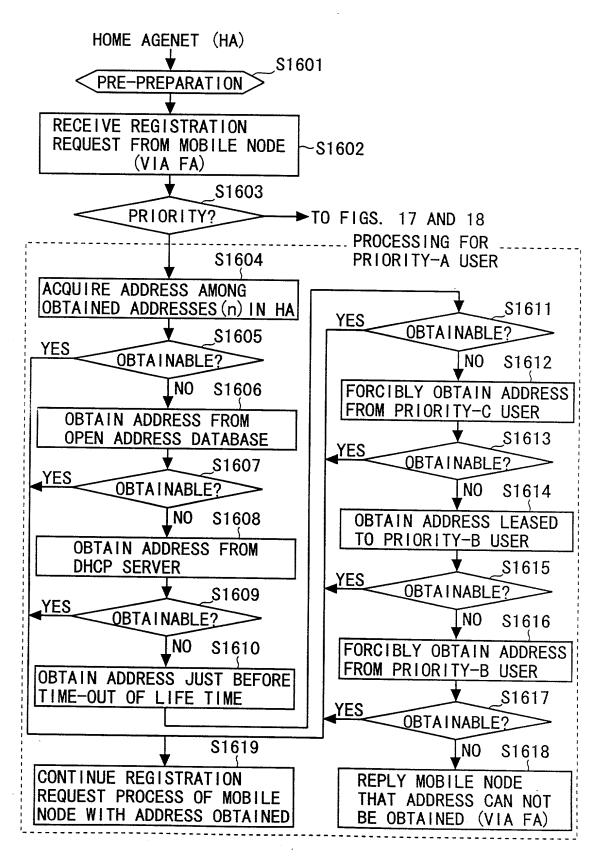


FIG. 17

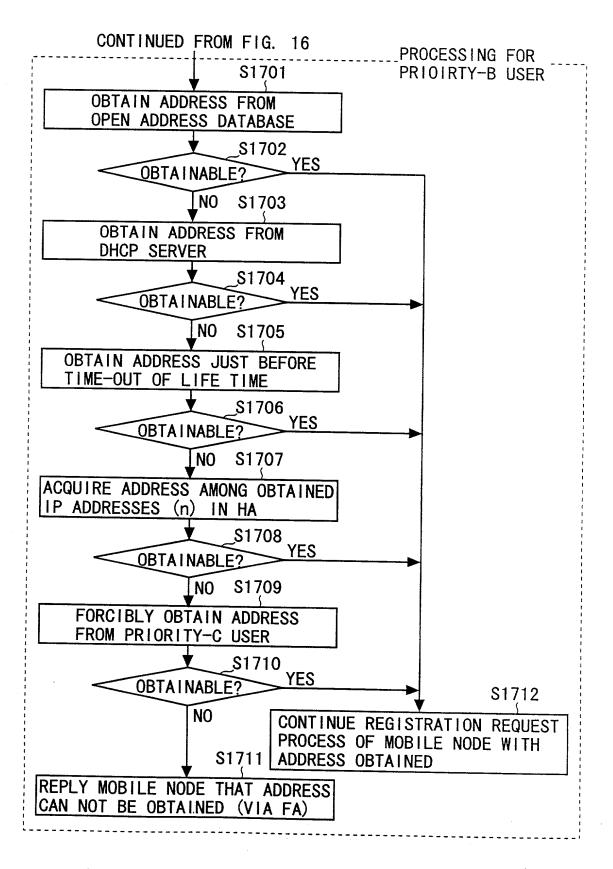


FIG. 18

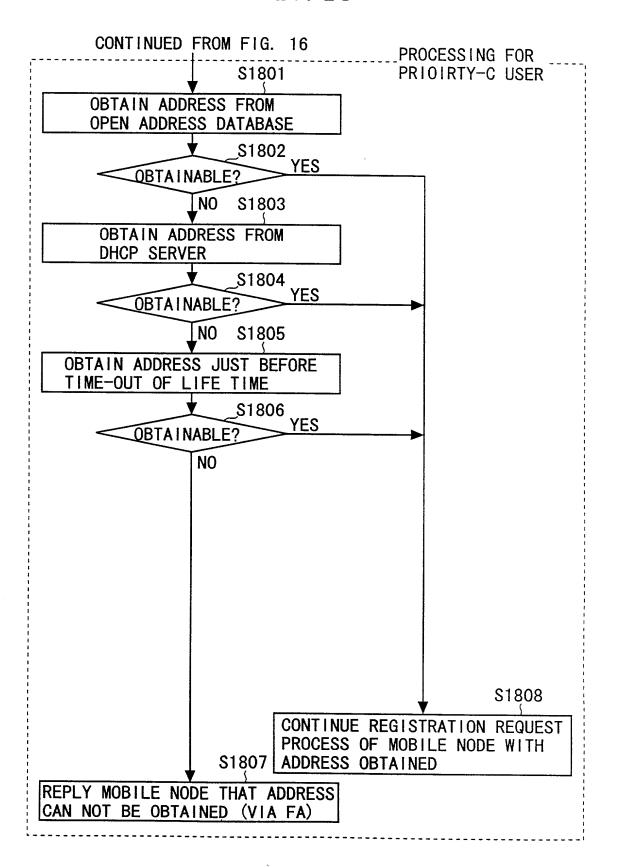


FIG. 19A

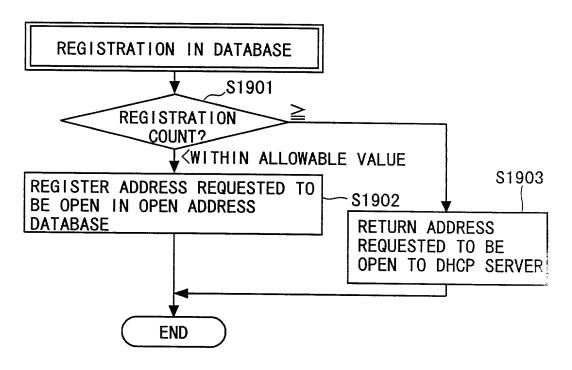


FIG. 19B

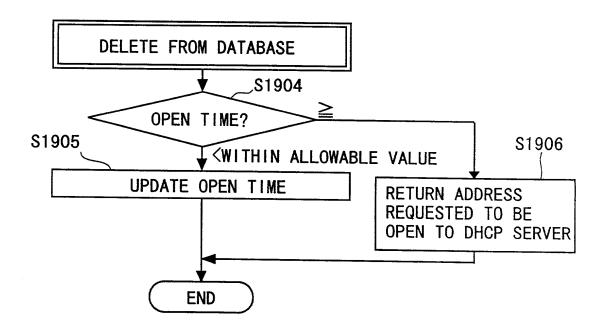
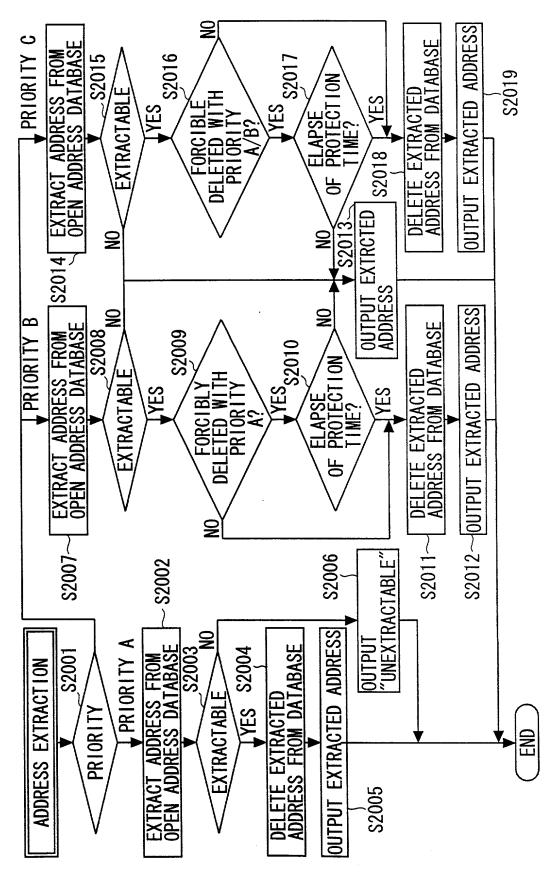


FIG. 20



#### FIG. 21A

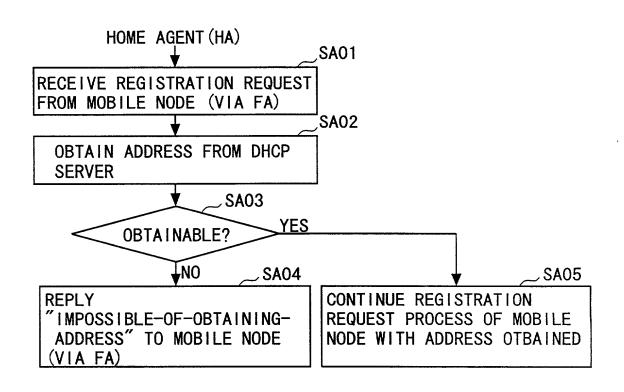


FIG. 21B

